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Infinite-time Ruin Measures for Compound Renewal Risk Models with Dependence

We study infinite-time ruin measures within risk models assuming dependence between interclaim times and claim amounts. We use change of measure techniques to obtain exact expressions for both the infinite-time ruin probability and the Gerber-Shiu discounted penalty function. Two different approaches are considered in the application of these techniques. Based on the expressions for the infinite-time ruin probability and the Gerber-Shiu function, we also derive Lundberg-type inequalities and asymptotic expressions for these two quantities. We investigate an important sampling method based on change of measure techniques. For specific bivariate distributions for the interclaim time and the claim amount, we derive their corresponding bivariate distributions resulting from the change of measure.